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09/806,844	04/05/2001	Werner Holzl	HM/2-21848/A	7726

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PATENT DEPARTMENT
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EXAMINER

MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,844

Applicant(s)

HOLZL ET AL.

Examiner

Leigh McKane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-24, 26, 28, 29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16, 17 and 32 is/are allowed.
- 6) ☒ Claim(s) 18-23, 26, 28, 29 and 31 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

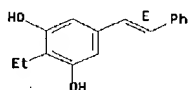
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18, 20, 21, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Webster et al (WO 95/03695).

Webster et al teaches antimicrobially treating a substrate with a stilbene derivative of 3,5-dihydroxy-4-substituted-trans-stilbene wherein the substituent is a C₁₋₆ alkyl group with either a straight chain or branched configuration, such as 3,5-dihydroxy-4-ethyl-trans-stilbene (which is an E-form). See page 14, lines 19-27. The stilbene derivative may be disposed on an inert carrier before dispersing on the desired substrate (page 18, lines 6-19) and may be applied to a human. See page 4, lines 5-21.

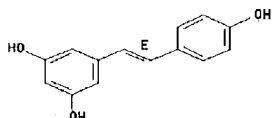


3,5-dihydroxy-4-ethyl-trans-stilbene

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3. Claims 18, 20-22, 29, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Docherty (U.S. Patent No. 6,197,834 B1).

Docherty teaches a method and composition for treating a surface wherein an antimicrobial composition containing resveratrol (3,5,4'-trihydroxystilbene, an E-form) is applied to a substrate (skin). See Abstract; col.4, lines 25-28; col.5, lines 3-17. The composition may take the form of a mouthwash or toothpaste, for washing and cleaning the mouth. Moreover, the resveratrol or other polyhydroxylated stilbene is added in an amount of up to 10 mg/ml (1%). See col.6, lines 8-16.



3,5,4'-trihydroxystilbene

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

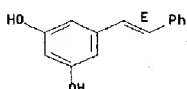
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Webster et al in view of Sheers (U.S. Patent No. 3,577,230).

Webster does not teach that the hydroxystilbene derivative is trans-3-5

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dihydroxystilbene. Sheers teaches that trans-3-5-dihydroxystilbene and compounds like it are "remarkable for their broad spectrum of biocidal activity and show a high degree of toxicity against many distinctly different and unrelated microorganisms, including algae, fungi, bacteria, and the like...". See col.2, lines 6-12.



trans-3-5-dihydroxystilbene

It would have been obvious to one of ordinary skill in the art to apply the hydroxystilbene of Sheers in the manner of Webster, as Sheers teaches that it has broad spectrum efficacy and also because it differs from the compound of Webster only in that it lacks the ethylene group at the 4-position.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Webster et al.

Webster et al teaches a composition for disinfection purposes, but is silent with respect to its use in deodorization. However, as the presence of a fungus and its exudates are a source of odor, it would have been obvious that the killing of fungus by the composition of Webster et al would also achieve deodorization.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Docherty.

Docherty teaches the use of polyhydroxystilbenes, such as tri- and tetrahydroxystilbenes. See col.4, lines 21-28. Therefore, it is deemed obvious that the tetrahydroxystilbene contemplated by claim 19, which merely adds another hydroxy to the resveratrol

(trihydroxystilbene) would have been used by one of ordinary skill in the art to control infection, as disclosed by Docherty.

Allowable Subject Matter

8. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: Although Webster et al, Ashida, and Sheers all teach the use of hydroxystilbenes in general, the particular hydroxystilbene of claim 24 is neither disclosed nor suggested.

10. Claims 16, 17, and 32 are allowed.

11. The following is an examiner's statement of reasons for allowance: Although Webster et al, Ashida, and Sheers all teach the use of hydroxystilbenes in general, the particular hydroxystilbene of claims 16 and 17 is neither disclosed nor suggested. With respect to claim 32, Athanassopoulos et al (Abstract of "Application of resins of the trityl type in solid phase organic synthesis") discloses the use of trityl resins for organic synthesis of amine, alcohol, and thiol-containing organic compounds but does not teach or suggest their use for synthesis of stilbenes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

12. Applicant's arguments filed 02 December 2003 have been fully considered but they are not persuasive.

13. With respect to Webster et al, Applicant argues that as Webster et al teaches the destruction of fungal diseases, it does not anticipate the present invention which "refers to the antimicrobial treatment of human substrates...." In response, the Examiner would again like to clarify the definition of "antimicrobial." As set forth in the previous office action, term *antimicrobial* refers to the destruction of all "microbes," which of course includes bacteria, viruses, fungus, molds, yeasts, etc. – essentially any organisms which can be viewed only with a microscope. Therefore, as the instant claims use the broad term *antimicrobially* (as contrasted with *bactericidally* or *antibacterially*), Webster et al anticipates the claims.

Moreover, it is noted that Webster et al specifically teaches the treatment of a "human substrate". See page 1, line 9. A human substrate would necessarily include a surface of a human, whether it be skin, hair, or mucose. Additionally, the Examiner would like to point out that nothing in any of the independent claims requires a "human" *per se*, as the claims state only "skin, mucosa and hair", which could be met by an animal.

14. As to the Docherty reference, Applicant argues the treatment of a virus-infected site as disclosed by Docherty is a therapeutic use not intended to treat bacteria. However, as disclosed above, the instant claims are not limited to the treatment of bacteria.

Moreover, although Applicant submits that the therapeutic applications of Docherty do

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not anticipate the "[p]ersonal care applications, i.e. the non-therapeutic treatment of human skin, mucosa and/or hair" of the present claim 19. However, the present methods require an "antimicrobially effective amount of a hydroxystilbene compound". The language "antimicrobially effective" implies a therapeutic treatment.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 703-305-3387. The examiner can normally be reached on Monday-Wednesday (7:15 am-4:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 703-308-2920. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Leigh McKane
Leigh McKane
Primary Examiner
Art Unit 1744

elm
January 28, 2004